

- Appl. No. 09/805,333
- Amd. Dated March 28, 2005
- Reply to Office Action of January 25, 2005

REMARKS/ARGUMENTS

Reconsideration of the rejections set forth in the Office Action dated January 25, 2005, is respectfully requested. Claims 1-19 and 21 have been rejected. Claims 22 and 23 have been added. As such, claims 1-19 and 21-23 are currently pending.

New claim 22 recites that storing a random value includes clocking the random value into a register. Support for this new claim may be found in the Specification, as for example on page 7 at lines 17-20. New claim 23 recites that sampling at time determined by the output of a linear feedback shift register includes determining when the output is an input to a sampling switch, and that sampling a signal to generate a random value occurs when the output is an input to the sampling switch. Support for this new claim may be found in the Specification, *e.g.*, on page 7 at lines 7-17.

Rejections under 35 U.S.C § 102 and 35 U.S.C. § 103

Claims 1, 2, 4-8, 10-14, 16-19, and 21 have been rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,430,170 issued to Saints et al. (hereinafter “Saints”). Claims 3, 9, and 15 have been rejected under 35 U.S.C. § 103(a) as being obvious over Saints in view of U.S. Patent No. 5,757,923 issued to Koopman Jr. (hereinafter “Koopman”)

Independent claim 1 recites a method for generating a random value that includes monitoring a signal obtained from a communication channel, sampling the signal to generate a random value, and storing the random value. The Examiner has argued that Saints teaches the method of claim 1. The Applicant respectfully disagrees, and submit that Saints does not teach or suggest storing a random value. The Examiner has cited the “output of 410” as shown in Figure 4 of Saints as showing that a random value is stored. The output of 410 is shown as being a random number, but there is no indication that a random number is stored. Saints teaches at lines 59-67 of column 9 that the number tested by a number test unit 410 may be provided for use

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as required, but does not teach or suggest that such a number is stored. As claim 1 requires that a random value is stored, and the cited art does not teach of such a limitation, claim 1 is believed to be allowable over the cited art for at least this reason.

Claims 2-6, 19, and 20 each depend either directly or indirectly from independent claim 1 and are, therefore, each believed to be allowable over the cited art for at least the reasons set forth above with respect to claim 1. Each of these dependent claims recites additional limitations which, when considered in light of claim 1, are believed to further distinguish the claimed invention over the art of record. By way of example, dependent claim 5 recites that monitoring a signal comprises monitoring a digital signal represented by multiple bits, and that the **multiple bits are reordered prior to sampling**. While Saints discloses a sample test unit 402 as noted by the Examiner in the Office Action dated January 25, 2005, there is no teaching or suggestion in Saints that the sample test unit reorders multiple bits prior to sampling. The sample test unit of Saints tests energy samples before providing the samples into a pool (Saints, column 9 at lines 1-3). As the sample test unit tests samples, it follows that the sample test unit performs tests after (not prior to) sampling. Further, the sample test unit does not reorder multiple bits, prior to sampling or otherwise. Instead, sample testing which is performed after sampling rejects some numbers, which is not equivalent to reordering multiple bits. Accordingly, claim 5 is also believed to be allowable over Saints for at least these additional reasons.

Dependent claim 19, which depends directly from independent claim 1, recites that a signal includes a modulation signal, and that additive noise is Additive White Gaussian Noise. The Applicant respectfully disagrees with the Examiner's assertion that Saints somehow teaches of these limitations. Although Saints uses the word "modulation" in column 1 at lines 25-49, the use of the word modulation is in the context of an amplitude modulation scheme and of modulation techniques in general. There is no teaching that a signal obtained from a communication channel is a modulation signal. Additionally, there is no teaching in Saints that additive noise in a signal that includes a modulation signal is Additive White Gaussian Noise. Saints appears to teach that noise is present at the input to a wireless receiver (Saints, column 2 at lines 21-22). However, Saints does not teach or suggest that the noise is Additive White

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Gaussian Noise. Hence, claim 19 is believed to be allowable over Saints for at least these reasons as well.

Regarding dependent claim 21, it is not evident to the Applicant how Figures 3-5 of Saints and the Abstract of Saints and teaches that a communication network is one of a wireless communication network, a data over cable network, and a DSL network. For example, it is respectfully submitted that Saints does not appear to teach or even suggest a communication network that is a DSL network. Accordingly, claim 21 is further believed to be allowable over Saints for this reason as well.

Dependent claim 3 recites that sampling comprises sampling at times determined by an output of a linear feedback shift register. On page 5 of the Office Action dated January 25, 2005, the Examiner has admitted that Saints does not disclose that sampling comprises sampling at times determined by the output of a linear feedback shift register. However, the Examiner has argued that Koopman teaches of such a limitation. It is respectfully submitted that while Koopman appears to teach that pseudo-random number generators are implemented using linear feedback shift registers (Koopman, from column 1 at line 63 to column 2 at line 6), Koopman fails to teach or suggest that the output of a linear feedback shift register determines sampling times. All Koopman appears to teach is that linear feedback shift registers may be used to generate pseudo-random numbers. The Applicant submits the use of linear feedback shift registers to generate pseudo-random numbers does not teach of or suggest using the output of a linear feedback shift register to determine times at which sampling occurs. As such, claim 2 is believed to be allowable over the cited art for at least this additional reason as well.

Independent claims 7 and 13 recite apparatuses which perform the method of claim 1. Therefore, claims 7 and 13, as well as their respective dependent claims, are each believed to be allowable over the cited art for at least the reasons set forth above with respect to claim 1.

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Conclusion

For at least the foregoing reasons, the Applicant believes all the pending claims are in condition for allowance and should be passed to issue. If the Examiner feels that a telephone conference would in any way expedite the prosecution of the application, please do not hesitate to call the undersigned at (408) 446-8696.

Respectfully submitted,



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